

3

FIG. 6 is an environmental view of the explosion containment system being fired at a homicide bomber.

FIG. 7 is an environmental view of the explosion containment system containing the homicide bomber.

Similar reference numerals refer to similar parts throughout the several views of the drawings.

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, it is seen that the explosion containment net of the present invention, generally denoted by reference numeral 10, is comprised of a net 12 which may be generally round in shape and have a central point 14 and an outer periphery 16. The net 12 is manufactured from an explosion containment material, which material has a high tensile strength. Once such material that is well suited for this application is aramid yarn (sold under the trademark KEVLAR and manufactured by the E.I. Du Pont de Nemours and Company), which is an organic yarn within the family of aromatic polyamides. KEVLAR has a unique combination of high strength, high modulus, toughness, and thermal stability. Some specific properties of KEVLAR are that it has a breaking tenacity of 22.0 grams/denier (194.2 cN/tex) which is more than five times as strong as steel wire and twice as strong as industrial yarns of nylon, polyester or fiberglass as used in mechanical rubber goods. KEVLAR has a high initial modulus of 525 grams/denier (4636 cN/tex), which is about twice the modulus of steel wire, four times the modulus of high tenacity polyester and nine times the modulus of high tenacity nylon. KEVLAR has an excellent thermal stability (retains 84% of its strength after 48 hours in dry air at 350 degrees. Although KEVLAR is an ideal candidate for the net 12, any appropriate material that has high strength and flexibility, such as graphite and boron reinforced fibers, etc., can be used to manufacture the net 12.

A nozzle 18 is located on the net 12 and may be located at the central point 14, while a series of weights 20 can be located about the outer periphery 16 of the net. A series of pleats 22 may be located on the net 12 and may extend radially outwardly from the central point 14 of the net 12, each pleat 22 is sewn together using an appropriate high strength thread, which may also be made from KEVLAR and the stitching used to sew the pleats together is spaced very close together.

A gun 24 is provided and has a cone loader 26, appropriate hand grips 28, a butt stock 30 (if desired) and a trigger 32. The gun may be pneumatically fired wherein a source of high pressure gas (not illustrated) provides the pneumatic force to fire the gun 24. This high pressure gas source may be either an external or internal canister or may be a small cartridge that is fed into the gun through the gun's chamber 34. Alternately, the gun 24 may be fired by a firing cartridge such as a standard firing blank.

A first tank 36 is provided and holds a fire suppressant agent therein, the fire suppressant agent being either FE-36 clean agent fire extinguishant or being selected from the group consisting of: Halon 1211, Halon 1301, IG-541, HFC-227ea, HFC-2 (FE13), HCFC Blend A, Carbon Dioxide, high expansion foam, protein foam, AFFF, microbial containing foam, Carbon Tetrachloride, dry powder extinguishant, and wet chemical extinguishant. A second tank 38 is provided and has a high density or high expansion foam therein. The first tank 36 and the second tank 38 are fluid flow connected with the nozzle 18 on the net 12 via a conduit 40 which passes through the gun 24 so that the trigger 32 on the gun can control discharge of the contents

4

of the two tanks 36 and 38. The two tanks 36 and 38 pass through a manifold 42 prior to entering the conduit 40. A section of the conduit 40 (the section that is disposed between the gun 24 and the nozzle 18) may be coiled for compactness of design. Carrying straps 44 may be provided for ease of carrying of the two tanks 36 and 38.

In order to use the explosion containment net 10 of the present invention, the net 12 is folded appropriately and placed into the cone loader 26 of the gun 24 and the gun 24 is appropriately primed (either a firing cartridge is inserted into the firing chamber 32 or a supply of pressurized gas is provided for the gun). Once the user identifies an appropriate target, such as a homicide bomber H or an explosive-laden container, etc., the user squeezes the trigger 32 in order to fire the gun 24 which propels the net 12 at the target in order to drape the net 12 over the target. The weights 20 along the outer periphery of the net 12 help the net land appropriate about the target in order to effectively cover the target. Continued squeezing of the trigger 32 causes the high density foam and the fire suppressant agent to be discharged through the nozzle 18 onto the target being covered by the net 12. If the target explodes, the net 12 helps absorb and otherwise contain the explosive blast created, while the high density foam also helps contain the explosive blast and the fire suppressant agent, helping to rob the explosion of oxygen, helps minimize the explosive force. As the blast occurs, the pleats 22 on the net 12 rip apart. As the stitching is a closely spaced high strength thread, the ripping apart of the pleats helps absorb some of the energy of the blast.

While the invention has been particularly shown and described with reference to an embodiment thereof, it will be appreciated by those skilled in the art that various changes in form and detail may be made without departing from the spirit and scope of the invention.

I claim:

1. A system capable of minimizing an explosive force of an explosive-laden device, the system comprising:

- a net manufactured from an explosion containment material, the net having an outer periphery, a central point and a nozzle located at the central point;
- a gun capable of propelling the net;
- a first tank having a fire suppressant agent therein;
- a conduit extending between the first tank and the nozzle via the gun; and

wherein the gun propels the net at the explosive-laden device and the fire suppressant agent is discharged out through the nozzle under control of the gun once the gun propels the net, and such that the net acts as a containment system that contains the explosive force from the explosive-laden device and the fire suppressant agent minimizes the explosive force.

2. The system as in claim 1 further comprising a second tank having a high density foam such that the conduit also extends between the second tank and the nozzle and the high density foam is also discharged once the gun propels the net and the high density foam helps contain the explosive force of the explosive-laden device.

3. The system as in claim 1 wherein the net has a plurality of pleats that are stitched together, each of the plurality of pleats radiating from proximate the central point toward the outer periphery such that each of the plurality of pleats is designed to tear apart upon the net acting to contain the explosive force from the explosive-laden device.

4. The system as in claim 1 further comprising at least one weight located about the outer periphery of the net.

5. The system as in claim 1 wherein the gun uses pneumatic force to throw the net.